### **Functions**



Start by navigating to the Online Lesson for instructions.

## **Objectives**

- O Determine if a graph is a function.
- $\bigcirc$  Write equations in terms of y or f(x).

#### Introduced in:

Algebra 1: Principles of Secondary Mathematics

Lesson 7B

#### **M** Functions

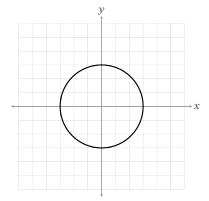
- (b) Fill in the notes as you watch the video in the Online Lesson.
- The is used on a coordinate plane to determine if a graph is a function.
- When a graph passes the VLT, the line only touches the graph at \_\_\_\_\_\_.
- When a function is present, the equation can be written in \_\_\_\_\_\_\_
- If function notation is used, you already know that the equation \_\_\_\_\_\_ a function.

#### **Example 1**

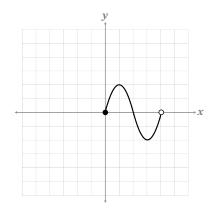
(b) Complete the example as you watch the video in the Online Lesson.

Determine if the graphs are functions.

A)



B)



#### Example 2

(b) Complete the example as you watch the video in the Online Lesson.

Write the equations with f in respect to x.

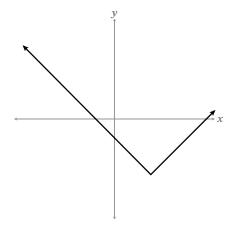
**A)** 
$$y = 3x + 7$$
  $f(x) = 3x + 7$ 

**B)** 
$$y = \frac{1}{2}x - 5$$

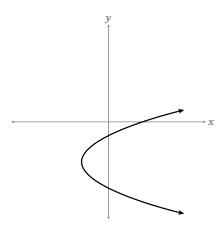
# Practice

Explain why the graph does or does not represent a function.

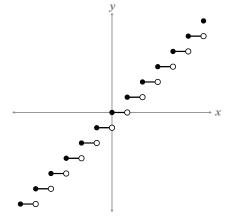
1)



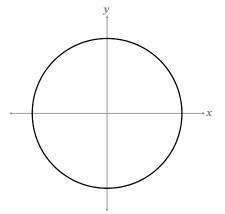
2)



3)

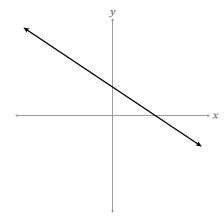


4)

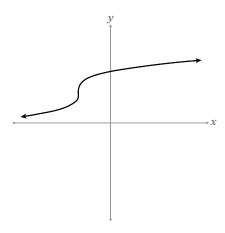


Explain why the graph does or does not represent a function.

5)



6)



Write in terms of f(x).

**7)** 
$$y = x^2 + 3x - 8$$

**8)** 
$$y = |x - 4|$$

**9)** 
$$y = -5(x+8)^3$$

**10)** 
$$y = \frac{1}{5}x + 9$$

Write in terms of *y*.

**11)** 
$$f(x) = 7x(x-9)^2$$

**12)** 
$$f(x) = 6x - 2$$

Curious about what these equations look like when graphed? Use technology to check it out.

To continue, return to the Online Lesson.